Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A computer program product for a system including a processor comprises:

a tangible memory coupled to the processor including:

code that directs the processor to determine an output resolution for an output stream of data;

code that directs the processor to determine an output frame rate for the output stream of data;

code that directs the processor to determine an output color depth for the output stream of data;

code that directs the processor to retrieve a first frame of data, a second frame of data, and a third frame of data from an input stream of data, the input stream of data having an input resolution, an input frame rate, and an input color depth;

code that directs the processor to subsample the first frame of data, the second frame of data, and the third frame of data to respectively form a first subsampled frame of data, a second subsampled frame of data, and a third subsampled frame of data, when the output resolution is lower than the input resolution;

code that directs the processor to remove the second subsampled frame of data, when the output frame rate is lower than the input frame rate;

code that directs the processor to reduce color depth for the first subsampled frame of data and the second subsampled frame of data to respectively form a first reduced frame of data and a second reduced frame of data, when the output color depth is smaller than the input color depth; and

code that directs the processor to convert the first reduced frame of data and the second reduced frame of data into the output stream of data.

2. (Original) The computer program product of claim 1 wherein the tangible memory further comprises:

code that directs the processor to determine an output bit rate for the output stream of data; and

code that directs the processor to scale the first reduced frame of data and the second reduced frame of data, in response to the output bit rate for the output stream of data

3. (Original) The computer program product of claim 1 wherein the output stream of data is in a format selected from the group consisting: MPEG-1, MPEG-2, MPEG-4, jpeg, gif, wbmp.

4. (Original) The computer program product of claim 1 wherein the output stream of data is in a format selected from the group consisting: *.avi, *.rm, *.mov.

5. (Original) The computer program product of claim 1 wherein the output resolution is a multiple of a frame having a resolution of approximately 80 horizontal pixels by approximately 60 vertical pixels.

6. (Original) The computer program product of claim 1 wherein the output resolution is a multiple of 8 horizontal pixels.

7. (Original) The computer program product of claim 1 wherein the tangible memory further comprises:

code that directs the processor to crop the first frame of data, the second frame of data, and the third frame of data before subsampling.

8. (Original) A program product for a processor comprises:

code that directs the processor to receive a specification of a resolution, a frame rate, a color depth, and format for the output video stream;

code that directs the processor to receive a specification of a resolution, a frame rate, and a color depth, for the input video stream;

code that directs the processor to receive a plurality of video frames from an input video stream;

code that directs the processor to subsampling each video frame from the plurality of video frames, when the resolution for the output video stream is different from the resolution of the input video stream;

code that directs the processor to drop video frames from the plurality of video frames, when the frame rate for the output video stream is different from the frame rate of the input video stream;

code that directs the processor to reduce color depth for video frames from the plurality of video frames, when the color depth for the output video stream is different from the color depth of the input video stream; and

code that directs the processor to convert the plurality of video frames to the output video stream in response to the format for the output video stream;

wherein the codes reside on a tangible media.

9. (Original) The program product of claim 8 further comprising

code that directs the processor to receive a specification of a bit rate for the output video stream; and

code that directs the processor to determine scaling factors for the plurality of video frames; and

code that directs the processor to scale the plurality of video frames by the scaling factors.

10. (Original) The program product of claim 8 wherein the format for the output video stream comprises an MPEG standard.

11. (Original) The program product of claim 8 wherein the format for the output video stream comprises a streaming video format.

12. (Original) The program product of claim 8 wherein the resolution for the output video stream is a rational multiple of the resolution. for the input video stream.

13. (Original) The program product of claim 8 the code that directs the processor to reduce color depth for video frames from the plurality of video frames is executed before the code that directs the processor to subsample each video frame from the plurality of video frames.

14. (Original) The program product of claim 8 wherein the format for the input video stream comprises data from a file.

15. (Original) The program product of claim 9 wherein the bit rate for the output video stream is greater than or equal to approximately 38 kilobits per second.

16. (Currently Amended) A program product for a processor for dynamically ~~reducing~~changing ~~bandwidth~~ characteristics of an input video stream to meet ~~bandwidth~~ requirements for ~~an~~ a plurality of different output video ~~stream~~ streams comprises:

code configured to direct the processor to ~~receive~~ obtain frames of data derived from the input video stream;

code configured to direct the processor to ~~receive~~derive ~~bandwidth~~ requirements for the output video ~~stream~~ streams, ~~and~~including ~~an~~ encoding ~~format~~ formats for the output video ~~stream~~ streams;

code configured to direct the processor to ~~reduce bandwidth used by~~change characteristics of the frames of data in response to the respective ~~bandwidth~~ requirements of the output video streams, to provide different ~~bandwidth reduction~~characteristic changes for each output video stream; and

code configured to direct a processor to respectively encode ~~bandwidth reduced bandwidth reduced~~characteristic-changed frames of data to form each of the output video ~~stream~~ streams in ~~the~~ their respective encoding format;

wherein the codes reside on a tangible media.

17. (Currently Amended) The program product of claim 16

wherein ~~bandwidth~~ the requirements comprise spatial bandwidth requirements; and

wherein the code configured to direct the processor to ~~reduce bandwidth used by~~change characteristics of the frames of data comprises code configured to direct the processor to ~~reduce~~ change spatial bandwidth used by the frames of data, in response to the spatial bandwidth requirements, to any resolution based at least in part on respective client device characteristics.

18. (Currently Amended) The program product of claim 17 wherein code configured to direct the processor to ~~reducing~~ change spatial bandwidth requirements comprises code configured to direct the processor to either upsample or subsample the frames of data.

19. (Currently Amended) The program product of claim 16

wherein bandwidth requirements comprise color bandwidth requirements; and

wherein the code configured to direct the processor to ~~reduce bandwidth used by~~ change characteristics of the frames of data comprises code configured to direct the processor to ~~reduce~~ change color bandwidth used by the frames of data in response to the color bandwidth requirements.

20. (Currently Amended) The program product of claim 19 wherein code configured to direct the processor to ~~reducing~~ change color bandwidth comprises code configured to direct the processor to ~~reduce~~ change a bit depth of the frames of data to any bit depth.

21. (Currently Amended) The program product of claim 16

wherein bandwidth requirements comprise frame rate requirements; and

wherein the code configured to direct the processor to ~~reduce bandwidth used by~~change characteristics of the frames of data comprises code configured to direct the processor to ~~reduce~~ change frame rate of the frames of data in response to the frame rate requirements and to update the frame rates dynamically in response to changes in the frame rate requirements during sessions that generate their corresponding output streams.

22. (Currently Amended) The program product of claim 21 wherein code configured to direct the processor to ~~reducing~~ change frame rate comprises code configured to direct the processor to eliminate frames from the frames of data.

23. (Currently Amended) A method for dynamically ~~reducing a bandwidth~~changing characteristics of an input video stream to meet ~~bandwidth~~ requirements for ~~an~~ a plurality of different output video ~~stream~~ streams comprises:

~~receiving~~ obtaining frames of data derived from the input video stream;

~~receiving~~ deriving ~~bandwidth~~ requirements for the output video ~~stream~~ streams, including ~~and an~~ encoding ~~format~~ formats for the output video ~~stream~~ streams;

~~reducing bandwidth used by~~changing characteristics of the frames of data in response to the respective ~~bandwidth~~ requirements of the output video streams, to provide different ~~bandwidth reduction~~characteristics for each output video stream; and

respectively encoding ~~bandwidth reduced bandwidth reduced~~characteristic-changed frames of data to form the each of the plurality of the output video ~~stream~~ streams.

24. (Currently Amended) The method of claim 23 wherein ~~bandwidth~~ the requirements comprise spatial ~~bandwidth~~resolution requirements; and

wherein ~~reducing~~ changing ~~bandwidth used by~~characteristics the frames of data comprises ~~reducing~~ changing ~~spatial bandwidths~~spatial resolution used by the frames of data in response to the spatial ~~bandwidth~~ resolution requirements.

25. (Currently Amended) The method of claim 24 wherein ~~reducing~~ changing ~~bandwidth~~ characteristics comprises either upsampling or subsampling the frames of data.

B4

26. (Currently Amended) The method of claim 23 wherein ~~bandwidth~~ the requirements comprise color ~~bandwidth~~requirements; and

wherein ~~reducing~~ changing ~~bandwidth~~ characteristics used by the frames of data comprises ~~reducing~~ changing color bandwidth used by the frames of data in response to the color ~~bandwidth~~ requirements.

27. (Currently Amended) The method of claim 26 wherein ~~reducing~~ changing color bandwidth comprises ~~reducing~~ changing a bit depth of any color format of the frames of data to any bit depth.

28. (Currently Amended) The method of claim 23 wherein ~~bandwidth~~ the requirements comprise frame rate requirements; and

wherein ~~reducing~~ changing ~~bandwidth used by~~characteristics the frames of data comprises ~~reducing~~ changing frame rate of the frames of data in response to the frame rate requirements.

29. (Currently Amended) The method of claim ~~27~~ 28 wherein ~~reducing~~ changing frame rate comprises eliminating frames from the frames of data.

30. (New) The method of claim 23, further comprising dynamically updating characteristics of the frames of data in at least some of the output video streams, in response to changes in either or both channel conditions or client device conditions, including increasing at least one of frame rate, bit rate, resolution, and color depth if such conditions permit.

31. (New) The method of claim 23 wherein the requirements comprise spatial bandwidth requirements and wherein changing characteristics of the frames of data comprises changing spatial bandwidth used by the frames differently for each session corresponding to each output video stream and based on different formats for respective output video streams.

32. (New) The method of claim 23 wherein changing the characteristics includes changing frame rate to improve quality, wherein changing frame rate includes reducing frame rate differently for each session that respectively generates each output video stream and based on respective encoding formats and client device characteristics associated with each output video stream, the method further comprising increasing the frame rates of at least some of the output video streams in response to changes in either or both the client device characteristics or channel conditions that permit frame rate increase.